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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,747	04/11/2002	Gerhard Nossing	12816-036001	1238

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EXAMINER	
PHAM, TUAN	

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,747	NOSSING, GERHARD	
	Examiner	Art Unit	
	TUAN A PHAM	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 April 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-20,27,28,31,32 and 34-39* is/are rejected.

7)☒ Claim(s) *21-26, 29-30, 33, and 40-44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 17-20, 28, 34, and 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasetti et al. (U.S. Patent No.: 5,596,637, hereinafter, "Pasetti") in view of Cotreau (U.S. Patent No. 5,515,417).

Regarding claims 17 and 35, Pasetti teaches a apparatus and method of a circuit for interference-proof detection in the operation of a grounding key (see figure 1), the circuit comprising:

a comparator configured to compare the detected current with at least one threshold value (see figure 1, comparator 6, col.5, ln.14-35); and

a monitoring circuit configured to (see figure 1, block 8):

detect a first period when the current exceeds the threshold value (see col.5, ln.14-65, col.10, ln.1-22);

detect a second period when the current drops below the threshold value (see col.5, ln.14-65, col.10, ln.1-22); and

output a grounding key detection signal when the first period is greater than the second period (col.9, ln.65-67, col.10, ln.1-41).

It should be noticed that Pasetti fails to clearly teach a current detection device (i.e., SLIC) configured to detect a current flowing when the grounding key is in operation. However, Cotreau teaches such features (see figures 1, SLIC 10, col.1, ln.10-27) for a purpose of detecting the signal on subscriber line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of a current detection device (i.e., SLIC) configured to detect a current flowing when the grounding key is in operation, as taught by Cotreau, into view of Pasetti in order to protect the telephone line being ground or fault.

Regarding claim 18, Pasetti further teaches the circuit wherein the comparator includes: a first comparator circuit configured to compare the detected current with an upper threshold value; and a second comparator circuit configured to compare the detected current with a lower threshold value (see figures 2, comparator A, comparator B, col.9, ln.35-54, col.10, ln.1-47).

Regarding claim 19, Pasetti further teaches the monitoring circuit is configured to output the grounding key detection signal when the first period of the current at the first comparator circuit is greater than the second period (see figures 2, comparator A, col.9, ln.35-54, col.10, ln.1-47).

Regarding claim 20, Pasetti further teaches the monitoring circuit is configured to output the grounding key detection signal when the second period of the current at the second comparator circuit is greater than the first period (see figures 2, comparator B, col.9, ln.35-54, col.10, ln.1-47).

Regarding claim 28, Passetti further teaches the monitoring circuit includes a polarity detection device configured to detect a polarity of the current (see col.3, ln.1-14).

Regarding claim 34, Pasetti further teaches the current detection device is an integrated circuit for digital telephone switching (see col.3, ln.15-31).

Regarding claim 36, Pasetti further teaches the method further comprising outputting the grounding key detection signal when the first period is greater than the second period and a predetermined adjustable period has elapsed (see col.10, ln.1-47).

Regarding claim 37, Pasetti further teaches the method further comprising: comparing the detected current with an upper threshold value; and comparing the detected current with a lower threshold value (see col.10, ln.1-47).

Regarding claim 38, Pasetti further teaches the method further comprising outputting the grounding key detection signal when the first period of the current at the first comparator circuit is greater than the second period (see figures 2, comparator A, col.9, ln.35-54, col.10, ln.1-47).

Regarding claim 39, Pasetti further teaches the method further comprising outputting the grounding key detection signal when the second period of the current at the second comparator circuit is greater than the first period (see figures 2, comparator B, col.9, ln.35-54, col.10, ln.1-47).

3. Claims 27, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasetti et al. (U.S. Patent No.: 5,596,637, hereinafter, "Pasetti") in view of Cotreau (U.S. Patent No. 5,515,417) as applied to claim 17 above, and further in view of Gores et al. (U.S. Patent No.: 5,511,118, hereinafter, "Gores").

Regarding claim 27, Pasetti and Cotreau, in combination, fails to clearly teach the upper threshold value is positive 17 milliAmperes (mA) and the lower threshold value is negative 17 mA. However, Gores teaches such features (see col.3, ln.55-62) for a purpose of adjusting the voltage on telephone line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the upper threshold value is positive 17 milliAmperes (mA) and the lower threshold value is negative 17 mA, as taught by Gores, into view of Pasetti and Cotreau in order to protect the telephone line being ground or fault.

Regarding claim 31, Gores further teaches the monitoring signal is configured to output the grounding key detection signal after a predetermined adjustable period has elapsed (see col.4, ln.6-17, col.9, ln.54-65).

Regarding claim 32, Gores further teaches the circuit wherein the predetermined adjustable period is 4 milliseconds (ms) (see col.9, ln.54-65).

Allowable Subject Matter

4. Claims 21-26, 29-30, 33, and 40-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although Bell et al. (U.S. Patent No. 5,048,080), McGary et al. (U.S. Patent No. 5,774,316), Cotreau (U.S. Patent No. 5,517,565), and Lechner (U.S. Patent No. 4,320,260) are not applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned for supporting the system and method for determining the connection condition of a subscriber line in a telecommunications network and ground fault detector for line power telephone network.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (703) 305-4987. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (703) 305-4708 and

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist, tel. No. 703-305-4700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2643
June 15, 2004
Examiner

Tuan Pham

CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600